



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,253	07/23/2003	Marc Schaepekens	RD-28,667-3	1023

7590 05/13/2005

General Electric Company  
CRD Patent Docket Rm 4A59  
M.N. Salamone  
P.O. Box 8, Bldg. K1  
Schenectady, NY 12301

EXAMINER
----------

ALEJANDRO MULERO, LUZ L

ART UNIT	PAPER NUMBER
----------	--------------

1763

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/626,253

Applicant(s)

SCHAEPKENS, MARC

Examiner

Luz L. Alejandro

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-39 is/are allowed.
- 6) ☒ Claim(s) 40-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

A portion of the information disclosure statement filed 7/23/03 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

If applicant wishes consideration of the references listed in the PTO-892 in the parent case, the references should be listed in the form of a PTO-1449 with ample room for the examiner to sign and initial each reference. A simple copy of the PTO-892 from the parent case will not be considered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 40-41 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Hwang, U.S. Patent 6,383,953.

Hwang shows the invention as claimed including a method of depositing a uniform coating on a planar surface of a substrate 306, the method comprising the steps

Art Unit: 1763

of: providing the substrate having the planar surface to a deposition chamber 302; evacuating the deposition chamber to a predetermined deposition pressure; generating a plurality of plasmas from at least one array of a plurality of plasma sources 200; injecting at least one reactant gas (plasma gas in fig. 3) into each of the plurality of plasmas through at least one common reactant gas injector 308 such that a flow rate of the at least one reactant gas into a first plasma is substantially equal to a second flow rate of the at least one reactant gas into a second plasma; flowing the at least one reactant gas and the plurality of plasmas into the deposition chamber toward the substrate ; and reacting the at least one reactant gas with the plurality of plasmas to form the coating on the planar surface of the substrate (see fig. 3 and its description).

With respect to claims 40-41, note from fig. 5 that the step of injecting a reactant gas into the plurality of plasmas comprises: supplying the at least one reactant gas from a reactant gas source to the at least one common reactant gas injector 312; passing the at least one reactant gas through a first plurality of orifices in the common reactant gas injector proximate to the first plasma 314 and a second plurality of orifices proximate to the second plasma; directing the at least one reactant gas through the first plurality of orifices into the first plasma at a first flow rate; and directing the at least one reactant gas through the second plurality of orifices into the second plasma at a second flow rate, the first flow rate being substantially equal to the second flow rate.

With respect to claim 44, and the newly added limitation "wherein said at least one common reactant gas injector comprising a tubular-walled structure having two linear portions parallel to each other and two end portions connecting the linear portions

Art Unit: 1763

is disposed between anodes of the plasma sources and the substrate and is circumferentially disposed with respect to the plasma source", note that the claim is directed to a product by process and is to be treated as a product claim. Therefore, such limitation is not given patentable weight since the limitation is not shown to affect the overall product.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang, U.S. Patent 6,383,953.

Hwang is applied as above but does not expressly disclose the first and second plurality of orifices containing different numbers of orifices and different conductances. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine through routine experimentation the optimum number of orifices and conductance of the plurality of orifices based upon a variety of factors including the desired flow rate or distribution of the gas into the deposition chamber and such limitation would not lend patentability to the instant application absent a showing of unexpected results.

### ***Response to Arguments***

Applicant's arguments filed 2/23/05 have been fully considered but they are not persuasive. Applicant's arguments regarding claim 32 and claims dependent therefrom are persuasive. However, note that claim 40 is an independent claim as is claim 44 and therefore these claims are not allowable due to any amendment to claim 32.

Specifically, concerning claim 44, note that claim 44 is a product by process claim, which is to be treated as a product claim, and therefore the newly added limitation to claim 44 is given different consideration than it would be given in the process claim of claim 32, as stated in the above rejection.

### ***Allowable Subject Matter***

Claims 32-39 are allowed.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a):

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


Art Unit: 1763

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Luz L. Alejandro  
Primary Examiner  
Art Unit 1763

May 11, 2005